Virginia Saltwater Development Fund
Evaluation of a Proposal for the Development of a Research or Data Collection Project

Project Number: 0606-12 **Date:** August 30, 2006

Title: L) Utility of Artificial Reefs to Enhance Production of Recreational Fish and Oysters Simultaneously.

"The Virginia Saltwater Recreational Fishing Development Fund is to be used solely for the purpose of conserving and enhancing finfish taken by recreational anglers, enforcing laws related to natural resource conservation, improving recreational fishing opportunities, obtaining necessary data and conducting research for fisheries management, and creating or restoring habitat for species taken by recreational fishermen."

Code of Virginia, Section 28.2-302.3

NOTE: Please read the entire scoresheet before beginning, then provide comments, and circle ( ) the appropriate score for each item. Thank You.

A. <u>Problem Description and Resolution (20 points)</u>

1. Comment on the adequacy of the problem description, background information, knowledge of available literature/data sources, and anticipated benefits.

The project description and background are adequate for an analysis of the project. There is a sound reason for analyzing the productivity of various reef structures in order to determine the most efficient and productive types since Virginia is engaged in an active artificial reef program for recreational fishermen and is increasingly considering reef structures to enhance oyster production. This project is mainly about oyster and mussel production; the monitoring of finfish usage of reefs may shed some light on the patterns of utilization and which reefs are more attractive to certain finfish, which can have benefits in reef designs for future deployment. The problem description and literature cited make note of documented increases in fish abundance and diversity on reefs versus "unprotected areas", of higher catch rates on areas with reefs than the same areas prior to reef deployment, and of reef areas being "buffered" against significant reductions compared to areas without reefs. These concepts are intuitively well established, but the study does not address the ongoing debate about the reason for these events – do reefs increase actual <u>production</u> of fish, or is the presence of fish as result of <u>aggregation</u> caused by the concentration

of prey resources. The proposal leads the reader to believe that the increased production of fish on reef sites (versus aggregation) is a well-established fact, when in fact this is still a subject of considerable discussion.

2. Describe your views on the conceptual approach to solve the problem.

The conceptual approach seems sound. By measuring the oyster and mussel counts through scrapings of areas of identical size on each type of reef structure, the proposal should be able to compare the productivity of each reef type. The result is an ability to rank the reef structures' productivity as it relates to the production of oysters and mussels, determining which types are best suited for use in artificial reef development for shellfish production.
By measuring finfish utilization of various reef structures, the project should be able to measure preferences among different species for various reef types.

SCORE (Circle one)	**Poor**				**Excellent**
	0	**5**	**10**	**(15)**	**20**

B. <u>Soundness of Project Design/Technical Approach (25 points)</u>

1. Is there sufficient information to technically evaluate the proposal?

The proposal provides sufficient information to evaluate the design and implementation of the proposal.

2. What are the strengths/weaknesses of the project design (thoroughness, practicality, methods, integration with other work, etc.)?

The project design seems well-suited to determining productivity of reef structures as they relate to oyster and mussel production. The utilization of video surveillance, diver observations, and circular nets to sample finfish utilization of the reef structures would seem to be a sound methodology. The utilization of recreational fishermen in Lynnhaven is the weakest link in the sampling protocols. The analysis of the utilization of finfish at the reef sites seems to be the weakest link in the proposal; and, again the results can only show the value of each reef type as an attractor of finfish not necessarily as an enhancer of production

SCORE (Circle One)	**Poor**					**Excellent**
	0	**5**	**10**	**15**	**(20)**	**25**

C. Project Management and Experience/Qualifications of Personnel (15 points)

What is your opinion of the experience and capabilities of the Principal Investigator(s) to manage and conduct the work, the availability of facilities, and education and experience of assisting personnel.

Experience and capabilities of the principal investigator and assisting personnel and available facilities are good.

SCORE (Circle one)	**Poor**			**Excellent**
	0	**5**	**(10)**	**15**

D. Project costs (15 points)

Is the budget realistic and reasonable? Indicate any unreasonable costs.

The budget seems excessive on its face. First, the funding of the entire salaries of two persons for a full year seems to be a stretch – will this project really require two persons to work full time for an entire year each? Will these individuals not be participating in any other projects during the year? The video system is a high cost item VIMS plans to use in multiple projects in future years, yet they are requesting complete funding from RFAB. VIMS indicates the total project cost is $220,643 and that they will be supplying $21,000 in funding, all in "soft" dollars. With regard to the companion project (Seitz), both projects call for vessel rental (large privateer), yet the daily rental rate is different. Second, the budget asks for 24 days of vessel rental and the companion project (Seitz) calls for and charges for 30 days of vessel rental, so the question must be asked if the vessel usage and rental can be coordinated to lower the costs of one or both projects. Both projects call for analysis of "scrapings" - one for epifauna, the other oysters and mussels. There is no indication the "scrapings" will or will not be coordinated for cost-savings nor if this is even possible and why or why not. Travel is charged at $.58/mile, which should be checked against current state guidelines. Boat fuel costs seem to be a slight bit high given the distance from launch facilities in Lynnhaven and that most boat travel will be in no-wake zones with minimal fuel usage; $50 per day at a cost of $3.25 per gallon is 15+gallons per day, but with the cost of fuel so volatile, this may be a good estimate. Overall, one must ask if the maximum level of coordination and cost savings have been explored between the companion studies, including possible cost savings in personnel.

SCORE (circle One)	**Poor**			**Excellent**
	0	**(5)**	**10**	**15**

E. Value of the Project to Fisheries Managers (25 points)

Do you believe the results of this project will further management of the species described? Will the results be useful to managers?

The project seems overly ambitious in the results it hopes to achieve. The results seem overstated, although there could be some good base line information generated about finfish usage of different reef structures. The real value of this project is the data generated on oyster and mussel production. In developing a numerical score for this proposal, a high number might be appropriate for the shellfish part with a much lower number for the finfish portion. Since this funding source is from recreational finfish revenues, the lower score will be utilized below.

SCORE (circle one)	**Poor**					**Excellent**
	0	**(5)**	**10**	**15**	**20**	**25**

PLEASE ADD ANY FURTHER COMMENTS ON THE PROPOSALS BELOW:

This reviewer feels it is hard to separate the Lipcius and Seitz projects. Taken together they are expensive and overly ambition in the results expected. The Lipcius project really seems to be about oyster and mussel production, and funding from the RFAB for this portion of the project may be a stretch. Both projects make assumptions about increasing productivity for finfish, when the degree of productivity increase versus aggregation is not known. One study that incorporates the recreational benefits would best be suited for RFAB funding; or, a cooperative project that incorporates other funding for the shellfish projects would seem appropriate.